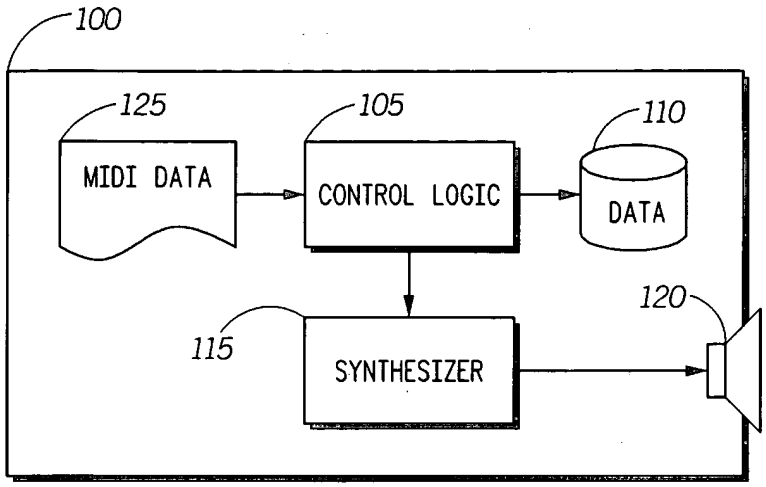

FIG. 1

200

INSTRUMENT	PRIORITY
SLIDE GUITAR	1
SLAP BASS	2
VIOLIN	3
PIANO	4
CONGAS	5
COWBELL	6
SHAKER	7
XYLOPHONE	8
TIMPANI	9

⟷ POLYPHONY AVAILABLE IN MIDI DEVICE =8

FIG. 2

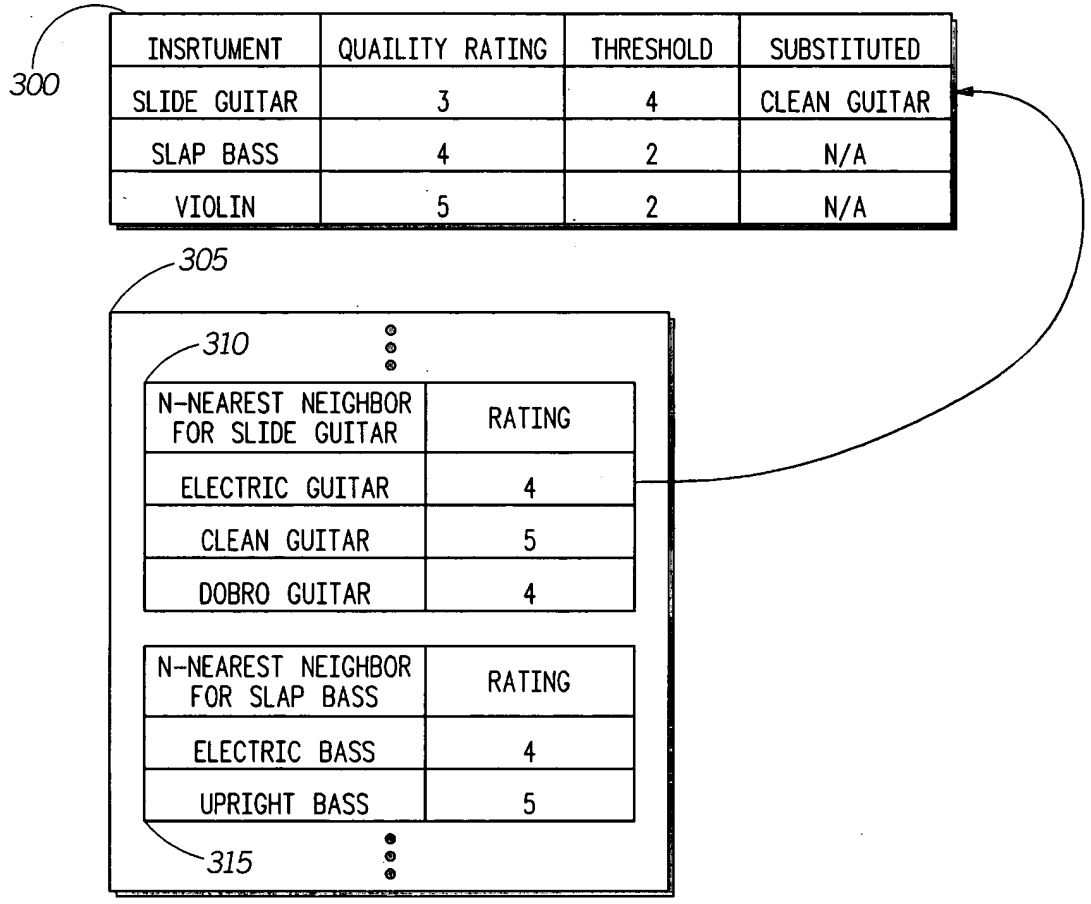
300
INSRTUMENT
QUAILITY RATING
THRESHOLD
SUBSTITUTED
SLIDE GUITAR
3
4
CLEAN GUITAR
SLAP BASS
4
2
N/A
VIOLIN
5
2
N/A
305
310
N-NEAREST NEIGHBOR FOR SLIDE GUITAR
RATING
ELECTRIC GUITAR
4
CLEAN GUITAR
5
DOBRO GUITAR
4
N-NEAREST NEIGHBOR FOR SLAP BASS
RATING
ELECTRIC BASS
4
UPRIGHT BASS
5
315

FIG. 3

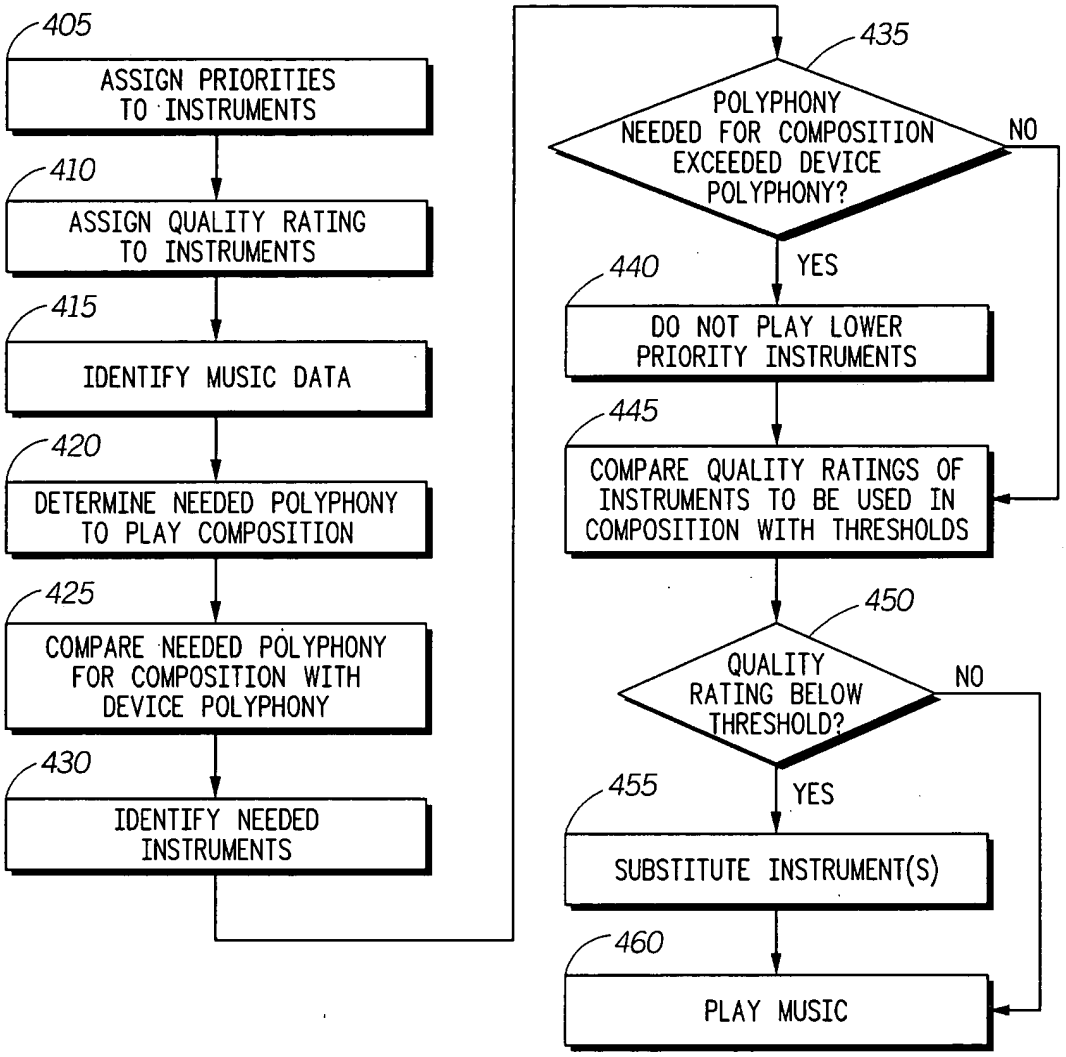
405
ASSIGN PRIORITIES TO INSTRUMENTS
410
ASSIGN QUALITY RATING TO INSTRUMENTS
415
IDENTIFY MUSIC DATA
420
DETERMINE NEEDED POLYPHONY TO PLAY COMPOSITION
425
COMPARE NEEDED POLYPHONY FOR COMPOSITION WITH DEVICE POLYPHONY
430
IDENTIFY NEEDED INSTRUMENTS
435
POLYPHONY NEEDED FOR COMPOSITION EXCEEDED DEVICE POLYPHONY?
NO
YES
440
DO NOT PLAY LOWER PRIORITY INSTRUMENTS
445
COMPARE QUALITY RATINGS OF INSTRUMENTS TO BE USED IN COMPOSITION WITH THRESHOLDS
450
QUALITY RATING BELOW THRESHOLD?
NO
YES
455
SUBSTITUTE INSTRUMENT(S)
460
PLAY MUSIC
400

FIG. 4